UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,490	05/21/2002	Constantin Von Altrock	40124/00601	6828

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EXAMINER
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3691	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 July 2007</u>.

2a)☒ This action is **FINAL**.　　　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>4-8,10-14 and 16-18</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>4-8,10-14 and 16-18</u> is/are rejected.

7)☒ Claim(s) <u>4, 10 and 16</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　　1.☐ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This application has been reviewed. Claims 4-8, 10-14 and 16-18 are pending.

The response to arguments and rejection(s) are as stated below.

Response to Amendment

1. Claims 1-3, 9, 16 and 19 have been cancelled.

2. Claims 4, 10 and 16 have been amended. The amendments to claims 4, 10 and 16 have been reviewed against the specification to check for new matter. Each of claims 4, 10 and 16 contain what could be determined as 'new matter'. The term, Neuro Fuzzy Inference Machine' was not defined in the specification. Instead the term, 'Neuro Fuzzy Interference Machine' was defined. The Examiner will assume that the Applicant has made a typo in the claim language, please see the Claim Objections section below. All other amendments to claims 4, 10 and 16 have been accepted for review.

Claim Objections

3. Claims 4, 10 and 16 are objected to because of the following informalities: The term, 'Neuro Fuzzy Inference Machine' was not defined in the specification. Instead the term, 'Neuro Fuzzy Interference Machine' was defined. The Examiner will assume that the Applicant has made a typo in the claim language, and will examine claims 4, 10 and

16 substituting 'Neuro Fuzzy Interference Machine' for 'Neuro Fuzzy Inference

Machine'. Appropriate correction is required.

Response to Arguments

4.   Applicant's arguments, see page 6, filed July 5, 2007, with respect to 35 USC

112 rejection(s) of claims 4 and 10 have been fully considered and are persuasive. The

Applicant has amended the claim language to overcome this rejection. The 35 USC

112 rejection(s) of claims 4 and 10 has been withdrawn.

5.   Applicant's arguments filed July 5, 2007 regarding the use of a Neuro Fuzzy

Interference Machine have been fully considered but they are not persuasive. The

Applicant argues the rejection with regard to the amended claim. The added term

'Neuro Fuzzy Interference Machine' refers to, according to page 10 and paragraph 39 of

the specification filed on May 21, 2002, decision logic software implemented on a

tandem computer including fuzzy expert rules and neuro fuzzy modules. The Applicant

argues that Omara does not teach the use of fuzzy rules. However, Basch does refer to

the use of fuzzy rules/sets in column 11 (lines 47-65). Basch also discloses that this

logic is implemented using software in column 10 (lines 1-15).

6.   Applicant's arguments filed July 5, 2007 with regard to the use of a ring buffer

have been fully considered but they are not persuasive. The Applicant discloses a ring

buffer as a buffer switched in series, on page 15 and paragraph 70 in the specification

filed on May 21, 2002. Basch discloses the use of a RAM cached database (or a buffer)

in column 12 (lines 7-29). The use of this buffer information in series, or first-in-first-out,

can be implemented as real-time processing (in other words, looking at the data one at

a time, or as the data arrives). Basch discloses the use of real-time processing in

column 8 (line 51) through column 9 (line 12), column 13 (lines 24-46) and column 18

(lines 20-49). Furthermore, Basch discloses that both historic and current transactions

can be used in column 8 (lines 13-29).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 4-8, 10-14 and 16-18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over O'Mara et al. (US 2002/0120559 A1) in view of Basch et al. (US

6,658,393 B1).

9.   Regarding claims 4 and 10, O'Mara et al. discloses:

- a method for determining an extent of a risk of a current transaction in the

  Abstract

- the transaction being fraudulent in the Background of the Invention, 1. Field of the Invention

- a computer controlled transaction system in figure 1 and paragraphs 7, 33 and 37.

- receiving data on the current transaction data (or in real-time in paragraph 11) in a prediction model, or data elements for a rules based logic, in paragraphs 22-24, 27, and 44-46.

- identifying a means of payment used in preceding transactions in the prediction model in paragraphs 8 and 42.

- combining a limit (in paragraph 51) with a value in the prediction model for generating an output value that depicts the extent of the risk of the current transaction being fraudulent and initiating reactions to the current transaction as receiving a value from the merchant that exceeds expected values in the Abstract, paragraphs 18, 19, 69, determining a rule score and/or a risk score in paragraph 28, and performing risk calculations in figures 1 & 2, paragraphs 17-19, 41 and 58.

- reactions have different magnitudes corresponding to the output value that depicts the extent of the risk of the current transaction being fraudulent and the limit is essentially based on expert rules and the limit being specific for a type of transaction in paragraph 69.

- the value being specific for the current transaction, or real-time transactions in paragraph 11.

- and combining the limit and the value is performed in a floating manner so that the output value varies in accordance with an extent of the risk of the current transaction being fraudulent in paragraph 71.

O'Mara et al. does not specifically disclose the value essentially based on a time series analysis of the preceding transactions with regard to the means of payment and the value being specific for the current transaction. Basch et al. teaches:

- risk value based on a time series analysis in a relational database (910) using a prediction model of the preceding transactions in column 20 (lines 4-39);

- with regard to the means of payment or how the account holder pays on the account in paragraphs Background of the Invention, Summary of the Invention, column 16 (lines 42-57) and column 18 (lines 30-49);

- the value being specific for the current transaction in the Abstract and column 8 (lines 13-39);

- fuzzy rules/sets in column 11 (lines 47-65) using software in column 10 (lines 1-15);

- a RAM cached database (or a buffer) in column 12 (lines 7-29);

- real-time processing in column 8 (line 51) through column 9 (line 12), column 13 (lines 24-46) and column 18 (lines 20-49); and,

- both historic and current transactions can be used in column 8 (lines 13-29).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify O'Mara to include time series calculations for a more detailed and accurate prediction of risk level.

10. Claims 5 and 11 discuss the system and method of claims 4 and 10, wherein the expert rules concern parameters which occur in statistically significant cumulative manner during fraudulent transactions. Claims 4 and 10 have been rejected based on the discussion(s) above. O'Mara discloses this in paragraphs 44-46.

11. Claims 6 and 12 discuss the system and method of claims 5 and 11, wherein the parameters relate to at least one element selected from the group consisting of an origin of a payment, an origin of a user, a branch of the current transaction, a beneficiary of the current transaction, a magnitude of the current transaction and a value of the current transaction. Claims 5 and 11 have been rejected based on the discussion(s) above. O'Mara discloses the use of a '30 Day Even Dollar Amount' as a data element in paragraph 44.

12. Claims 7 and 13 discuss the system and method of claims 4 and 10, wherein the time series analysis is implemented in the form of fuzzy logic rules. Fuzzy logic rules are described as, defining a limit for each transaction type that corresponds to the (user-specific) "risk readiness", in paragraph 22 of the specification by the applicant. Claims 4 and 10 have been rejected based on the discussion(s) above. While O'Mara does disclose the use of limits for predicting risk in paragraphs 10 and 51, O'Mara does not specifically disclose the use of time-series analysis. Basch et al. teaches the use of time series analysis in a relational database (910) using a prediction model of the

preceding transactions in column 20 (lines 4-39). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify O'Mara to include time series calculations for a more detailed and accurate prediction of risk level.

13.　　Claims 8 and 14 discuss the system and method of claims 4 and 10, wherein the expert rules are implemented in the form of fuzzy logic rules. Claims 4 and 10 have been rejected based on the discussion(s) above. O'Mara discloses: the use of expert rules, or data elements for a rules based logic, in paragraphs 22-24, 27, and 44-46; and fuzzy logic in paragraphs 10 and 51.

14.　　Referring to claim 16, O'Mara discloses:

- a method which is implemented on a computer and which is provided for identifying and determining fraudulent transaction data in a computer-controlled transaction processing system Abstract, Background of the Invention '1. Field of the Invention', figure 1, paragraphs 7, 33 and 37.

- a prediction model for receiving current transaction data for processing the current transaction data or data elements for a rules based logic, in paragraphs 22-24, 27, and 44-46.

- and for outputting at least one output value that depicts a probability of a fraudulent transaction as performing risk calculations in figures 1 & 2, paragraphs 17-19, 41 and 58.

- wherein, on the basis of stored data as determining a rule score and/or a risk score in paragraph 28.

- and expert rules concerning parameters which occur in a statistically significant cumulative manner during fraudulent transactions in paragraphs 44-46.

- especially with respect to the origin of the means of payment or user, or types of payments in paragraphs 8 and 42.

- to the branch, or contractual partner who requested the authorization, as the cardholder to authorizes the transaction in paragraph 12.

- the beneficiary of the transaction, as the merchant in the Abstract, Background of the Invention, Summary of the Invention and paragraph 37.

- as well as to the magnitude or value of the transaction and the prediction model combines a limit based on the expert rules in a floating manner in paragraphs 44 and 71.

- The limit specific for the type of transaction, with a value, which is essentially based on preceding transactions with regard to the same means of payment and which is specific for the current transaction, in order to generate the output value and which can be used to initiate reactions of different magnitude to the current transaction request instead of the definition of only one risk-threshold for authorization of the transaction as receiving a value from the merchant that exceeds expected values in the Abstract, paragraphs 18, 19, 69.

O'Mara et al. does not specifically disclose: that value is essentially based on a time series analysis of the preceding transactions with regard to the means of payment; the

value being specific for the current transaction; a Neuro Fuzzy Interference Machine; and, a ring buffer. Basch et al. teaches:

- risk value based on a time series analysis in a relational database (910) using a prediction model of the preceding transactions in column 20 (lines 4-39);

- with regard to the means of payment or how the account holder pays on the account in paragraphs Background of the Invention, Summary of the Invention, column 16 (lines 42-57) and column 18 (lines 30-49);

- the value being specific for the current transaction in the Abstract and column 8 (lines 13-39);

- fuzzy rules/sets in column 11 (lines 47-65) and discloses that this logic is implemented using software in column 10 (lines 1-15);

- a RAM cached database (or a buffer) in column 12 (lines 7-29); and,

- both historical and current transactions can be used in column 8 (lines 13-29).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify O'Mara to include time series calculations for a more detailed and accurate prediction of risk level.

15.   Claim 17 discloses the method of claim 16, wherein the time series analysis is implemented in the form of fuzzy logic rules. Claim 16 has been rejected based on the discussion(s) above. While O'Mara does disclose the use of limits for predicting risk in paragraphs 10 and 51, O'Mara does not specifically disclose the use of time-series analysis. Basch et al. teaches the use of time series analysis in a relational database

(910) using a prediction model of the preceding transactions in column 20 (lines 4-39). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify O'Mara to include time series calculations for a more detailed and accurate prediction of risk level.

16.　　Claim 18 discloses the method of claim 16, wherein the expert rules are implemented in the form of fuzzy logic rules. Claim 16 has been rejected based on the discussion(s) above.　O'Mara discloses: the use of expert rules, or data elements for a rules based logic, in paragraphs 22-24, 27, and 44-46; and fuzzy logic in paragraphs 10 and 51.

Conclusion

7.　Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.　Accordingly, **THIS ACTION IS MADE FINAL.**　See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action.　In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Muriel Tinkler whose telephone number is (571)272-7976. The examiner can normally be reached on Monday through Friday from 7:30 AM until 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on (571)272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MT
September 13, 2007

HANI M. KAZIMI
PRIMARY EXAMINER